

STCG TANK SUBGROUP MEETING MINUTES

November 10, 1998

Welcome/Updates/Announcements (Cathy Louie)

Cathy welcomed the group and asked for introductions around the room.

Technetium Workshop Results (Cathy Louie)

The Technetium Workshop report is available now and copies will be made for Subgroup members. Cathy would like everyone's comments by next month. The report covers inventory, characterization, and technology options for analysis and speciation, and includes TWRS assumptions for technetium. There were also some discussions of waste form at the workshop. The inventory uncertainty is large regarding the amount of technetium produced and the amount still on Site.

Geosafe Briefing and Tour (Paul Scott)

Paul reported that the Geosafe briefing and tour by Jack McElroy are on hold until spring (possibly February). It will be useful to get an update on in situ vitrification (ISV) technology during the time frame that we are immersed in the Hanford S&T needs assessment process.

Tank Closure Workshop (Craig West)

The second Tank Closure Workshop provided good dialogue/information exchange among participants. There were about 90 attendees, including TFA representatives, Ken Bracken (HAB), Wade Riggsbee (Yakama Indian Nation), Stan Sobczyk (Nez Perce Tribe), an Ecology representative, Hanford Integrated Groundwater/Vadose Zone Project representatives, TWRS representatives (including Maureen Hunemuller), NAS representatives, and EPA representatives.

Retrieval technology performance criteria were reviewed at the workshop. Handouts from the workshop will be distributed to the Subgroup members.

A survey was done after last year's workshop regarding the topics/issues for future discussion. The results indicated that the participants wanted to hear status reports from the sites, planned technologies, and any problems encountered. Litigation taking place at Savannah River was a cloud over the workshop.

The purposes of the workshop were to exchange information and lessons learned, and to discuss approaches to closure and obstacles encountered. Craig noted that Hanford seems to be held to a higher standard and produces higher-quality products. In order to help with tank closure issues, Craig suggested that the Tank Subgroup be knowledgeable about the Hanford Tanks Initiative (HTI).

TFA FY99 Kick-Off Meeting (Cathy Louie)

Cathy mentioned that she and Ken Gasper had attended the TFA FY99 Kick-Off Meeting the previous week, where they mainly discussed the technology needs prioritization criteria. Cathy brought back a TFA video of FY98 accomplishments to show the Subgroup.

Office of River Protection (Cathy Louie)

This is the new name Congress gave TWRS. It's a separate line item from the Richland field office management, and its funding will be insulated from Site funding. There is a solid line to HQ and a dotted line to RL on the new organization chart.

EMSP Project Presentations (Bill Bonner)

Bill introduced the Environmental Management Science Program (EMSP) as a joint program of DOE's Offices of Environmental Management and Energy Research. The program is aimed at solving problems five years down the road, although much of the information it generates is useful today.

Radiation-Induced Catalysis (Mike Henderson)

Teresa Fryberger was the principal investigator on this project. They are using ionizing radiation to do photocatalysis. TWRS Safety and Pretreatment are the main thrusts of the work. They have shown that oxidative destruction and reductive precipitation can occur at the same time. Ken Gasper noted that this research may be able to help Hanford and Savannah River with understanding certain reactions (e.g., 101-SY slurry growth).

Speciation of Sr, Am, and Cu (Andy Felmy)

Andy Felmy discussed chemical speciation and aqueous electrolyte modeling. Ken Gasper funded some of this work. It is focused on the fundamental aspects of chemical speciation, and supports several Site needs. Some of this work can feed into TWRS Program decisions in real time.

Colloidal Agglomerates (Joel Tingey)

Joel Tingey discussed how to manipulate rheology with tank parameters (e.g., pH, salt content). In some processing steps agglomeration is desirable (e.g., sludge washing), but in others it isn't (e.g., transport).

Interfacial Radiolysis (Thom Orlando)

They are studying organic waste degradation and flammable gas production. Their fundamental data has been used by the Waste Tank Safety Program.

Radiation Effects (Bill Weber)

This is the largest EMSP project that PNNL has. The objective is to develop a fundamental understanding of radiation effects in glasses and ceramics, using 1/3 computer simulations and 2/3 experimental methods. The primary significance or impact is longer-term. They are studying the impact of radiation effects (if they occur under interim storage or repository conditions) on dissolution mechanisms or dissolution rates (i.e., radionuclide release rates).

F-Block Sequestering Agents (Ben Hay)

They are looking at structure/function relationships of organic complexants. How selective can you make them for separations? They could design metal-specific detectors. How do amides react with metals structurally? Ken Gasper noted that there are radiation-resistant bacteria living in the Savannah River tanks.

FY98 Tank Subgroup Annual Report

The Subgroup Annual Report was endorsed for transmittal to the STCG Management Council.

FY99 Tank Subgroup Work Plan

The Subgroup made comments on the draft Work Plan. The facilitator agreed to incorporate the comments and send out the revised version by November 11. Comments from the members were due to the facilitator by November 20.

Action Items

1. Make copies of the Technetium Workshop report for Subgroup members (facilitator).
2. Make copies of the Tank Closure Workshop handouts for Subgroup members (facilitator). Done.
3. Send out revised version of Subgroup Work Plan by November 11 (facilitator). Done.
4. Send comments on the Work Plan to the facilitator by November 20 (all members). Done by some members.

Meeting Attendees

Bill Bonner (PNNL)
Dennis Brown (DOE-RL/STP)
Rene Corrales (PNNL)

Linda Fassbender (PNNL)
Andy Felmy (PNNL)
Ken Gasper (LMHC)
Ben Hay (PNNL)
Mike Henderson (PNNL)
Bill Kuhn (PNNL)
Cathy Louie (DOE-RL/TWRS)
Thom Orlando (PNNL)
Vince Panesko (PREC)
Paul Scott (FDH)
Steve Skurla (Ecology)
Nancy Uziemblo (Ecology)
Bill Weber (PNNL)
Craig West (DOE-RL/WDD)

Next Meeting

The next meeting will be held on December 8th at 1:00 p.m. in the ISB-1 White Bluffs Room.